



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/300,798	04/27/1999	KENNETH E. COOKE	REALNET.033A	4852

25943 7590 12/05/2003

SCHWABE, WILLIAMSON & WYATT, P.C.
PACWEST CENTER, SUITES 1600-1900
1211 SW FIFTH AVENUE
PORTLAND, OR 97204

EXAMINER

ARMSTRONG, ANGELA A

ART UNIT	PAPER NUMBER
----------	--------------

2654

DATE MAILED: 12/05/2003

18

Please find below and/or attached an Office communication concerning this application or proceeding.

M

Office Action Summary

Application No.

09/300,798

Applicant(s)

COOKE, KENNETH E.

Examiner

Angela A. Armstrong

Art Unit

2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 22, 2003 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made. ✓

2. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frederick (US Patent No. 5,768,126) in view of Laroche (US Patent No. 6,049,766) in further view of Bhadkamkar et al (US Patent No. 5,893,062) and Shepard (US Patent No. 5,943,347).
3. Regarding claims 1-20, Frederick teaches an audio mixer for mixing multiple audio data streams. Frederick teaches
receiving a first audio data stream at the Abstract and col. 5, lines 57-60
receiving a second audio data stream at the Abstract and col. 5, lines 57-60

Art Unit: 2654

mixing samples of the two data streams at col. 19, lines 61-67 continuing to col. 20, lines 1-9.

Frederick does not specifically teach cross fading the samples as a mixing implementation. Refer to Laroche who teach a method of audio signal processing which modifies the time and or pitch scale of an audio signal via a cross-fading method.

Laroche teaches

Re-sampling or normalizing samples based on a desired sampling rate at col. 3, lines 42-43 and Figure 2, element 206

Applying cross-fade weighting to the samples at col. 4, line 14, and lines 44-45

Cross-fading samples at Figure 3B and Figure 4.

Laroche implements the weighted cross fading method in order to reduce conspicuous artifacts that are generated during audio signal processing at col. 2, lines 6-10.

Therefore, it would have been obvious to one of ordinary skill at the time of invention to modify the audio mixer of Frederick to implement a weighted cross-fading algorithm or mechanism as taught by Laroche, for the purpose of reducing artifacts during the mixing of data streams, as suggested by Laroche at col. 2, lines 6-10.

Frederick and Laroche do not specifically teach cross-fading data based in part upon a change in bandwidth capability of the communication link, wherein the sets of data correspond to a playback time. However, cross-fading audio data based upon changes in the network status and cross-fading data that correspond to a particular playback time was well known.

Refer to Shepard who teaches an apparatus and method for error concealment in an audio stream. Specifically, at col. 3, line 35 continuing to col. 5, line 24, Shepard teaches determining

Art Unit: 2654

that there is a problem with a received packet, and inserts one cycle of a fundamental pitch period with a cross-fade to replace lost or dropped data, such that the cross-fade renders transitions between boundaries of existing, original data and any inserted data much smoother.

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Frederick to implement cross fading based in part upon a change in network status, as taught by Shepard, for the purpose of rendering transitions between boundaries of existing, original data and any inserted data much smoother, as suggested by Shepard.

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the mixing system of Frederick and Laroche to implement cross fading based on the overlapped portions of the data signals, as taught by Bhadkamkar, for the purpose of producing smooth transitions between the signals being mixed, as also suggested by Bhadkamkar at col. 17, line 65 – col. 18, line 2.

Frederick does not specifically teach the specifics of cross fading the samples based on overlapped portions of the audio signals. However, cross fading data at the point of overlap was well known. Refer to Bhadkamkar who teaches variable rate video playback with synchronized audio. Specifically, at col. 17, line 51 continuing to col. 18, line 20, Bhadkamkar teaches blending a first segment overlap with a second segment overlap, such that the blending can be accomplished using any appropriate technique that produces smooth transitions between the end of the first segment and the beginning of the second segment, such as cross fading.

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the mixing system of Frederick to implement cross fading based on the overlapped

Art Unit: 2654

portions of the data signals, as taught by Bhadkamkar, for the purpose of producing smooth transitions between the signals being mixed, as also suggested by Bhadkamkar at col. 17, line 65 – col. 18, line 2.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela A. Armstrong whose telephone number is 703-308-6258. The examiner can normally be reached on Monday-Thursday 7:30-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (703) 305-9645. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

Angela A. Armstrong
Examiner
Art Unit 2654

AAA
November 30, 2003


RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER